Trip Report
2002 Annual Inspection of the
Parkersburg, West Virginia,
Nuclear Waste Policy Act Section 151(c) Disposal Site

Summary

The Parkersburg, West Virginia, site was inspected on September 14, 2002. Overall, the site was in good condition. Vegetation on the cell cover was drought-stressed and dormant. The perimeter fence remains serviceable but should be repaired. Boundary monument BM–4, not found in 2000 and 2001, was located under sediment by a local surveyor. No requirements for a follow-up inspection or monitoring were identified.

1.0 Introduction

This report presents the results of the annual U.S. Department of Energy (DOE) inspection of the Nuclear Waste Policy Act (NWPA) Section 151(c) disposal site at Parkersburg, West Virginia.

M. Widdop (Chief Inspector) and D. Scheuerman (Assistant Inspector), both of S.M. Stoller Corporation, the Technical Assistance Contractor at the DOE Grand Junction Office (GJO), conducted the inspection on September 14, 2002. The inspection was conducted in accordance with the *Long-Term Surveillance Plan* [LTSP] *for the Parkersburg, West Virginia, Disposal Site* (DOE–GJO, September 1995).

The purposes of the annual inspection were to confirm the integrity of visible features at the site, to identify changes or new conditions that may affect site integrity, and to determine the need, if any, for maintenance or follow-up inspections and monitoring.

2.0 Inspection Results

Features and photograph locations (PLs) mentioned in this report are shown on the attached drawing.

2.1 Site Access

The access road that leads to the site from Foster Drive and the grade over the railroad tracks is in good condition and provides adequate clearance for a passenger car. The access route is along a permanent 20-foot-wide right-of-way that is unimpeded.

2.2 Site Perimeter and Security Fence

The security fence is in fair condition. Although the fence continues to function as designed, most of the chain link fabric is becoming heavily rusted due to the humid climate of the region. The chain link fence is now approximately 17 years old. The fence may remain serviceable for another 5 years or more.

Barbed wire is attached to angle brackets along the top of the entire security fence. Inspectors noted that one of the three strands of barbed wire had rusted through and broken at two locations. Generally, the condition of the barbed wire is poor. Inspectors observed severe rusting of the barbed wire at many locations. Apparently, the life expectancy is shorter for the barbed wire than for the chain link fabric. The Long-Term Surveillance and Maintenance Program will ask the vegetation control contractor to repair the broken strands in the spring during a scheduled trip to the site. Additional breaks in the barbed wire are expected and inspectors should carry fence repair tools and extra wire to repair breaks found during future inspections.

During previous inspections, two bent steel fence posts were noted (near perimeter signs P9 and P14). Additional bent posts were noted between perimeter signs P6 and P7, the top rail was out of its socket at two locations, and several angle brackets were bent or broken.

Because the fence generally remains serviceable, the program should consider repairing the fence and replacing the barbed wire in the near future. At some time, the condition of the fence will become so degraded that the entire security fence system (i.e., posts, fabric, top railing, barbed wire, hardware, etc.) will require replacement.

Padlocks on the entrance and personnel gates are heavily rusted. Some locks are so corroded they no longer work. In 2003, inspectors and other workers visiting the site should be prepared to cut rusted locks to gain access and should carry replacement locks.

Spraying vegetation along the base of the security fence with herbicide is an annual maintenance action at this site. Inspectors noted that weeds along the base of the fence appeared to have been sprayed in 2002.

Perimeter signs are in good condition. As requested, the vegetation control contractor replaced the entrance sign and perimeter sign P7 in 2002. Adhesive overlays with the correct description of the cell contents were applied to perimeter signs in 2001. These remain in good condition.

2.3 Disposal Cell

The grass on the disposal cell cover, essentially the area inside the security fence, appeared drought-stressed and dormant. Soil was dry and loose and the grass was mostly brown. Site vegetation was mowed in early September and no growth had occurred before inspectors arrived on site.

Inspectors walked a series of traverses inside the security fence to inspect the disposal cell top, monitor wells, and grass cover. Inspectors observed no signs of settlement, erosion, or other modifying process that would indicate a threat to cell integrity. Inspectors noted the cell surface was more irregular than could be discerned when covered with thick vegetation.

In 2002, inspectors could not readily identify the extent of thistle (identified in the field as Canada thistle) on the disposal cell. Inspectors should look for thistle in 2003 and the vegetation control subcontractor should survey the site for thistle after the growing season starts in 2003 and treat the thistle as necessary.

The condition of the six monitor wells inside the fence is unchanged. Monitor wells MW–5 and MW–6, installed by DOE in 1994, are in excellent condition. The casings on the four AMAX wells (MW–1 through MW–4) are heavily rusted. Padlocks on most the monitor wells also are heavily rusted and will probably require replacement when the wells are sampled next in 2004.

Inspectors noted burrowing near monitor well MW–1 (PL–1) and on the northwest portion of the site (PL–2). The burrowing brought soil to the surface that had the same characteristics of surface soil and was probably from the topsoil layer.

2.4 Area Between Security Fence and Property Boundary

Grassed areas outside the security fence were mostly dry and dormant. No erosion was observed.

Since 1997, annual mowing operations include one pass of a tractor and brushhog along the outside of the security fence on the southeast and southwest sides. This appears to be an effective and low-cost means to keep vegetation away from the security fence. Previously, trees and woody bushes intertwined with the fence have been a problem at the Parkersburg site. Ongoing control practices (cutting, clearing, and spraying with herbicide) appear to be effective, as vegetation growth was not observed to be a pervasive problem at the time of the 2002 site inspection. Continuing control will be necessary to prolong the service life of the fence and to maintain site appearance.

Abundant thistle has been observed since 1999 along the outside of the security fence between perimeter signs P3 and P9. Again, this appears to be Canada thistle, although a positive identification has not been made. As on the cell top, inspectors could not readily discern the extent of thistle where it was found previously because of the stressed condition of all vegetation. The subcontractor should continue to assess these areas and treat infestations as necessary.

The drainage channel in the southwest corner of the site, lined with concrete and energy dissipation baffles in August 1996, is in excellent condition and functioning as designed. Erosion has not recurred.

Inspectors could not find boundary monument BM–4 during the 2000 or 2001 site inspections. This monument is located in the bottom of a drainage ditch that parallels the northern property boundary. A local surveyor was retained to locate the monument, replace if missing, and install a reference monument away from the drainage invert. The surveyor found BM–4 covered by more than 4 inches of sediment (PL–3). All other boundary monuments were located and were in excellent condition.

2.5 Outlying Area

The Parkersburg site is located in a developed industrial area. Inspectors observed that no development or change in adjacent land use has occurred that threatens site integrity or access, or would result in more incidental traffic near the site.

3.0 Recommendations

1. The chain link fabric on the security fence is heavily rusted, as are the three strands of barbed wire on top of the security fence. Other individual fence parts are deteriorated, bent, or broken. The fabric, posts, gates, and top rail may last five years or more but the barbed wire is severely deteriorated at several locations and is expected to continue to break (page 1).

   Recommendation: Because the fence generally remains serviceable, the program should consider repairing the fence and replacing the barbed wire in the near future. At some time, the condition of the fence will be so degraded that the entire security fence system (i.e., posts, fabric, top railing, barbed wire, hardware, etc.) will require replacement. Inspectors should continue to monitor the overall condition of the fence to determine the optimal time for replacement and should carry repair tools to fix broken barbed wire.

3. Thistle north of the site fence and on the interior of the perimeter fence has been a persistent problem. Because of drought conditions and recent mowing, inspectors could not discern the abundance or extent of thistle during the 2002 inspection (pages 2 and 3).

   Recommendation: Inspectors should look for thistle in 2003 and the vegetation control subcontractor should survey the site for thistle after the growing season starts in 2003 and treat as necessary.

4. Boundary monument BM–4 was found beneath sediment (page 3).

   Recommendation: A ground-level reference monument should be installed beyond the drainage invert.

5. Most of the padlocks on the entrance gate, personnel gates, and monitor wells are heavily rusted. These padlocks may be inoperable during future site visits (page 3).

   Recommendation: Inspectors should be prepared to cut rusted padlocks and/or chain and replace with new equipment during future site visits.

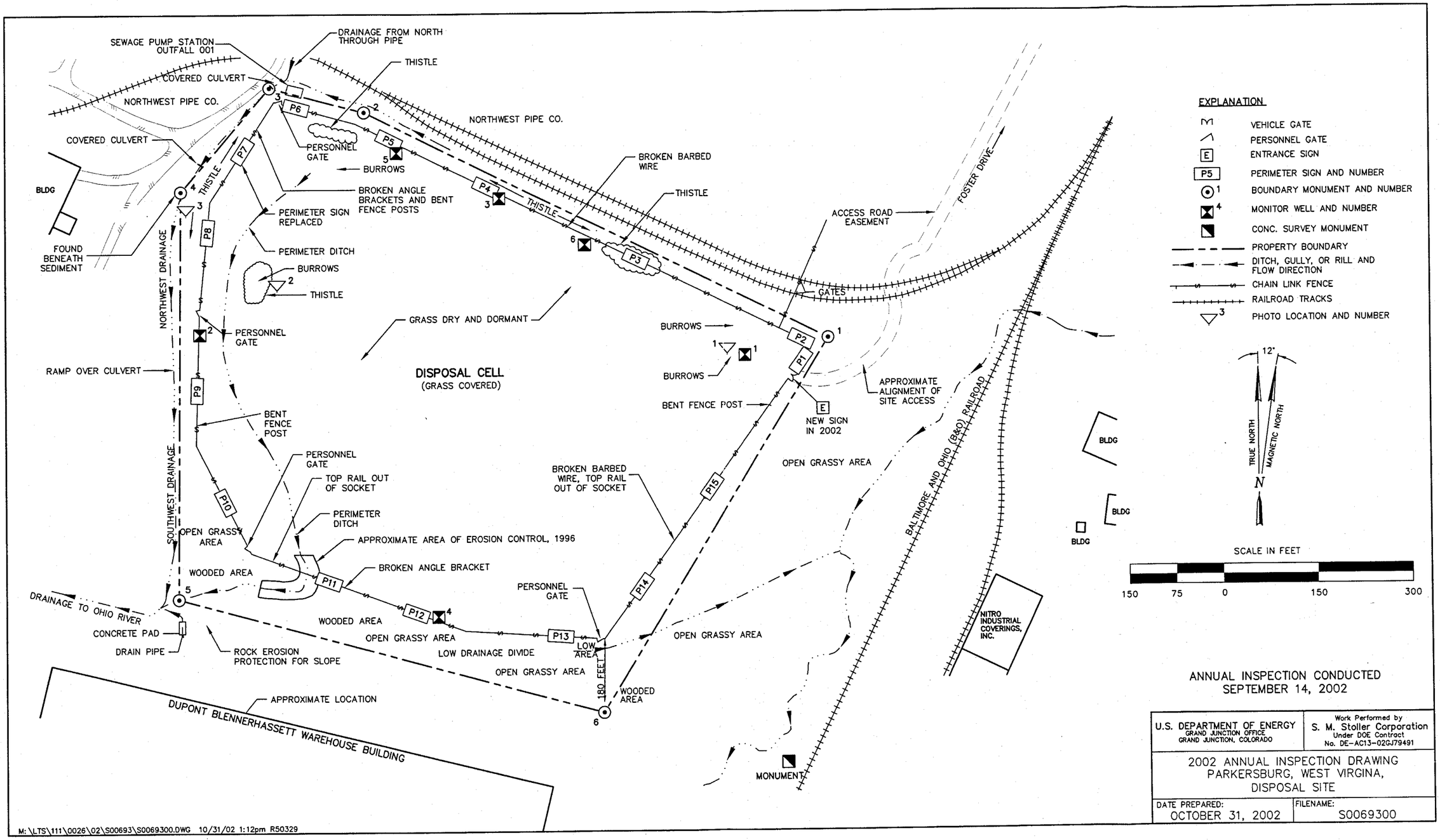
4.0 Photographs

Photo Location Number	Azimuth	Description
PL–1	110	Burrowing near Monitor Well 1.
PL–2	330	Burrowing on the northwest portion of the cell cover.
PL–3	330	Boundary Monument BM–4.

PKB 9/2002. PL–1. Burrowing near Monitor Well 1.

PKB 9/2002. PL–2. Burrowing on the northwest portion of the cell cover.

PKB 9/2002. PL–3. Boundary Monument BM–4.



ANNUAL INSPECTION CONDUCTED
SEPTEMBER 14, 2002

U.S. DEPARTMENT OF ENERGY GRAND JUNCTION OFFICE GRAND JUNCTION, COLORADO	Work Performed by S. M. Stoller Corporation Under DOE Contract No. DE-AC13-02GJ79491
2002 ANNUAL INSPECTION DRAWING PARKERSBURG, WEST VIRGINA, DISPOSAL SITE	
DATE PREPARED: OCTOBER 31, 2002	FILENAME: S0069300

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